ElectroSense
Test Plan Document

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1. Introduction
1.1 Test Plan Identifier
        ElectroSense Patient Monitoring
1.2 Scope
        This document is meant to serve as a guideline and plan for final confirmation of the efficacy of our created program. Its goal is to outline the features that we will test vs. the features we won't, give a brief description of the approach to testing we are going to have to take, and finally our testing schedule and responsibilities.
1.3 Test Items
        Our system consists of 5 sensor categories, 1 heating pad and 2 circulation pumps. Each of these has their own sets of functions, data and react to patients in different ways.
1.4 Features To Be Tested
        We plan on testing each of the aforementioned devices according to multiple criteria to be laid out individually. Each of these tests will include testing for the Bluetooth transmission capability as well as the capability of the App to accurately display the data to the user. We also plan on testing a few use case scenarios. Through testing we also plan to find the possible Bluetooth range of the system, as in how far away can a phone be away from the system in order to connect to it. Therefore the features we plan on testing for are:
    1. The ability of the system to accurately read, transfer and display the Heart Rate of a patient.
    2. The ability of the system to accurately read, transfer and display the Pulse Oximetry of a patient.
    3. The ability of the system to accurately read, transfer and display the Temperature of a patient.
    4. The ability of the system to accurately read, transfer and display the Pressure of a patient on the mattress.
    5. The ability of the system to accurately read, transfer and display the Sleeping pattern of a patient.
    6. The ability of the system to safely and accurately change bed temperature based on operator input.
    7. The ability of the system to safely and accurately physically move a patient with its circulation pumps based on user input.
    8. The ability of the system to promptly issue patient and system warnings and errors.
2. Description
2.1 Approach
        For the aforementioned features 1-5 of our system, the sensors. We plan on creating specific conditions from which we can calculate the expected values that should be displayed to the operator. If the system displays said values to a reasonable degree of similarity between the theoretical values, we will determine that the related sensor passes our criteria.
        For feature 6 we plan on applying a thermometer to the surface of the relevant heating pad and compare it to several desired values inputted by the operator. If the inputted value matches the output value the test passes.
        For feature 7 we plan on testing the circulation pumps ability to move items through a human test subject. If the subject is safely moved in a desired way, the test passes.

For feature 8, we will simulate the necessary conditions for a plentitude of warnings about patient status to occur. If the system detects these conditions and issues a warning the test passes.

3. Team Organization

3.1 Responsibilities

Feature	Alexis	Kayla	Mark0
1	10%	10%	80%
2	10%	10%	80%
3	10%	10%	80%
4	10%	10%	80%
5	10%	10%	80%
6	10%	10%	80%
7	10%	10%	80%
8	10%	10%	80%

3.2 Schedule

Feature #	Anticipated Completion Date	Milestone
1-2	Oct 31	2
3-5	Nov 28th	3
6,7	TBA	4
8	TBA	5